ANA MOYA PELLITERO

THE PHENOMENOLOGICAL EXPERIENCE OF THE VISUAL LANDSCAPE

3.1 INTRODUCTION

In our contemporary European context 'landscape' has become one pivotal topic to be considered by territorial planning at an institutional level. There is a huge concern for the preservation of the rich environmental landscape heritage, the careful integration of the landscape within territorial development processes and the understanding of the cultural and social relation at a perceptual level. In order to analyse and monitor landscape evolution and change, and at the same time to plan and manage territorial transformations, geographers, planners and landscape architects use GIS (Geographical Information Systems) as a powerful mapping tool. However, one of the main challenges they face is the mapping and monitoring of landscape taking into consideration its quantitative and tangible nature, together with its qualitative and intangible. Both natures of landscape are relevant in order to set planning decisions.

GIS is a tool that allows the mapping of the spatial qualities of landscape, identifying morphological and geometric properties, evaluating physical changes, allowing the comparison of their differences and analysing the properties of the vision of the physical space (optical axes, visibility fields, visual sequences). All of these values are quantitative and tangible. However the mapping of qualitative and intangible values in the environment creates the following problems: How to measure and map the cultural values of landscape and their changes?; How to detect the existence of *visual models* of reference?; How to know cultural landscape configu-

rations?; How to study the evolution of artistic and symbolic representations in a specific territory?; How to acknowledge the sensorial perception of different social groups?; How to understand the communicability of landscape?; What is the response of social groups to landscape threats or improvements?; How to capture and map the subjective emotional responses that involve the experience of landscape such us, tranquillity, fear, claustrophobia, stress, ennui, or the sense of beauty?

In order to take into consideration the collective and individual phenomenological experience of landscape, new methods to capture, map and represent qualitative data are needed. The main sources of information for the mapping of qualitative and intangible information are sociological inquiries and surveys. Experts are aware of the need to take into account mechanisms of social participation to elaborate landscape catalogues, to measure the evolution and the dynamics of the physical landscape and its perception, to achieve objectives of landscape quality, and to incorporate them into territorial planning. In the sphere of landscape planning and management, a participative methodology, unanimously recognised and tested, does not exist at the moment (Nogué, Puigbert, et al., 2010: 9). In relation to future research on a new social participative methodology, the following questions arise: How often periodical surveys to collect qualitative data are needed in order to map the evolution of the relation of society with its close environment?; Which is the minimum number of surveys that should be collected?; Who are the target groups to be addressed?; How many types of questionnaires are needed?; Which variety of platforms are required to inform these social groups?; Which type of locations and survey technologies are more adequate (workshops, door-to-door, websites, interviews to landscape agents, telephone surveys)?

This chapter aims to explore how the qualitative and intangible nature of landscape can be incorporated into the analyses and monitoring typically performed through GIS. In order to research a new participative methodology, and to elaborate new ways of mapping the social phenomenological experience of landscape, it is necessary to research the integration of computer mapping applications. These are specifically Geographic Information Systems, with digital platforms of collective participation and creation of knowledge, available through social networking sites on the Internet.

3.2 LANDSCAPE AND THE PHENOMENOLOGICAL RELATION WITH THE ENVIRONMENT

Any environment, natural, rural or urban, cannot be only reduced to a physical object that is measured, analysed, monitored, or captured through mapping, human beings also relate to their environment through their beliefs, emotions and senses. This existential relation brings

together the objective and the subjective, the physical qualities of the space and its perceptual and sensorial experience, the tangible (quantitative) geographic values and the intangible (qualitative) emotional connotations. The Japanese philosopher Tetsurô Watsuji created a term, *fûdosei*, to define the intimate union between nature and culture and between the environment and human life (Watsuji, 1935). *Fûdosei* represents the life bond of being inside the environment and the climate, and the experience of it. The physical environment is being shaped by culture, however culture is also the result of the existential expression of a society being shaped by the environment. The cultural geographer and orientalist Augustin Berque translates the term *fûdosei*, created by Watsuji, in the term *médiance*, which he remarks, has a 'trajectory' nature, because it is developed in a specific historical time and in a particular geographical space. Berque asserts that the notion of landscape does not exist at all times, nor in all societies and cultures. The absence or the existence of landscape is based on the way of 'seeing' and perceiving the environment as landscape (Berque, 1995). There are societies that do not possess the notion of landscape, and therefore they perceive the environment as another type of reality. This is the case with the aborigines in the western desert of Australia, who do not possess the notion of landscape. They have related to their natural environment through myths projected into their geography. The *Tjukurpa* ("Dreaming Time") is a mytho-ritual structure with multiple expressions (songs, dances, ground and body paintings). The knowledge of their world emanates from *Tjukurpa*, which defines networks of social spaces of territorial and ritual knowledge, based on spatio-physical narratives ('ritual itineraries' or 'ancestral tracks') of the ancestors' journeys, actions and performances across their land (Poirier, 2005: 53). In particular cultural, social and historical conditions, societies have modelled their human relation with the environment, transforming it into landscape. Berque makes a distinction between societies that are only connected to the environment by the 'look' and other forms of non-aesthetic relation (*proto-landscape societies*), and with societies that appreciate the environment under qualitative ideals and cultural aesthetic modes of expression (*landscape societies*) (Berque, 1995). According to him, all landscape societies present the same five criteria: (1) treatises on landscape; (2) linguistic representations (or different ways to say 'landscape'); (3) written representations describing the aesthetic and sensorial values of the environment; (4) pictorial representations with the environment as a subject and (5) the existence of pleasure gardens, translating an aesthetic appreciation of the environment and nature (Berque, 1994). As such, a landscape epiphany appears in Western Europe in the sixteenth century, connected to the Humanism 'modern consciousness' of the world and in China, dating from the Han dynasty (206 B.C – 220 A.D.), both comprising their respective cultural zones of influence.

In our present time and in our European context, landscape planning and landscape urbanism also takes into consideration phenomenological values and the qualitative nature of landscape. The Council of Europe in the European Landscape Convention in Florence (2000), defines landscape as "an area, as perceived by people, whose character is the result of the action and

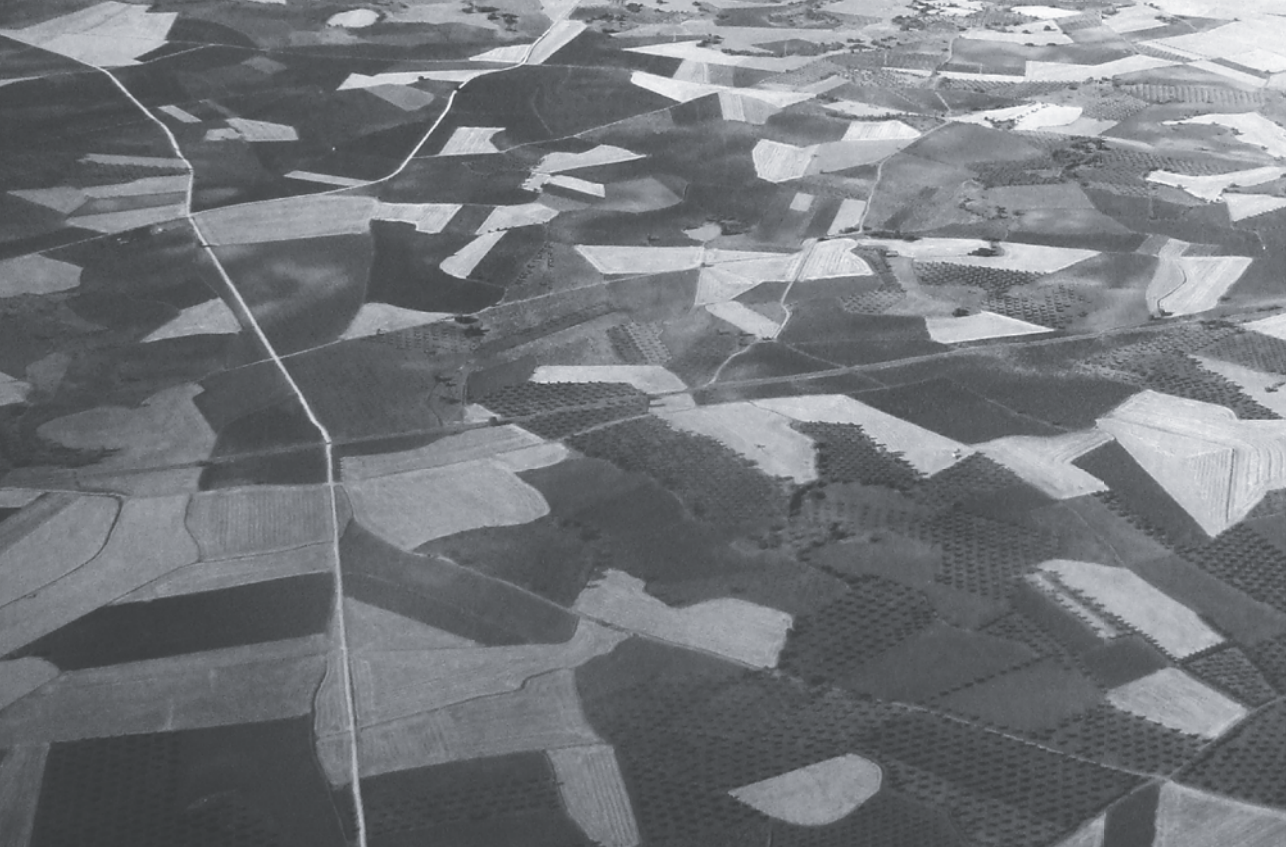


Figure 1
The rural landscape is a fragile cultural heritage. Its present physiognomy and the mental bonds to the land are in danger of disappearing, due to the abandonment of family farms, and the introduction of industrial agriculture. La Campiña, Madrid

interaction of natural and/or human factors" (European Landscape Convention, 2000: 3). The Convention aims to promote landscape protection, management and planning, and to organise European co-operation on landscape issues. Its scope applies to "the entire territory of the Parties and covers natural, rural, urban and peri-urban areas. It includes land, inland water and marine areas. It concerns landscapes that might be considered outstanding as well as everyday or degraded landscapes" (European Landscape Convention, 2000: 3). Each local government should include policies "to recognise landscapes as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity", and "to integrate landscape into its regional and town planning policies and in its cultural, environmental, agricultural, social, and economic policies, as well as in other policies with possible direct or indirect impact on landscape" (European Landscape Convention, 2000: 4). In this way landscape planning as a "strong forward-looking action to enhance, restore and create landscapes", aims to preserve the social links, the sense of belonging and the rich cultural mental bonds deposited into an environment shaped, after all, by culture. This may be any one type of environment; inside the city, in its periphery, in rural areas or natural spaces. We must emphasise that these environments are always perceived by people independently if they are historical or exceptional landscapes, or any everyday degraded space.

Surveys to understand the psychology of perception of the inhabitants of specific geographical areas are needed, in order to be able to apply, into planning policies, the requirements of the European Landscape Convention.

In this first decade of 2000, scholars, architects, urban planners and landscape architects agreed in the emergence of a new hybrid practice, involving urban planning and landscape. Landscape, incorporated inside planning, is not only understood as the interest in geographical studies -ecological and cultural, but also the study of landscape in its conceptual scope, as a tool to theorise, design, and organise large urban sites, territories, and systems (ecological, programmatic, infrastructural). James Corner in his article, *Terra Fluxus* (2006), defines *landscape urbanism* as a hybrid practice that takes into consideration "processes over time", "anticipates strategic scenarios and operational logics through a wide range of scales", "reconsiders representational and operative techniques", by computer mapping applications (GIS), visual modelling, and malleable graphics, and "takes in account the phenomenal richness of physical life (social imaginary, collective memory, desires, the tactile and the poetic)". In his definition of landscape urbanism, James Corner upholds the importance and relevance of the theme of the social imaginary in landscape in order to approach processes, staging of surfaces and operational methods in landscape urbanism. Therefore, the imaginary links organisational methods with phenomenological considerations. In his opinion, in any planning or urban design, it is necessary to consider the collective imagination, stimulated by the experience of the real world. He sees the space and the environment as a container of visual cultural memory and desires. For him, materiality, representation, and imagination are not separate worlds (Corner, 2006: 32).

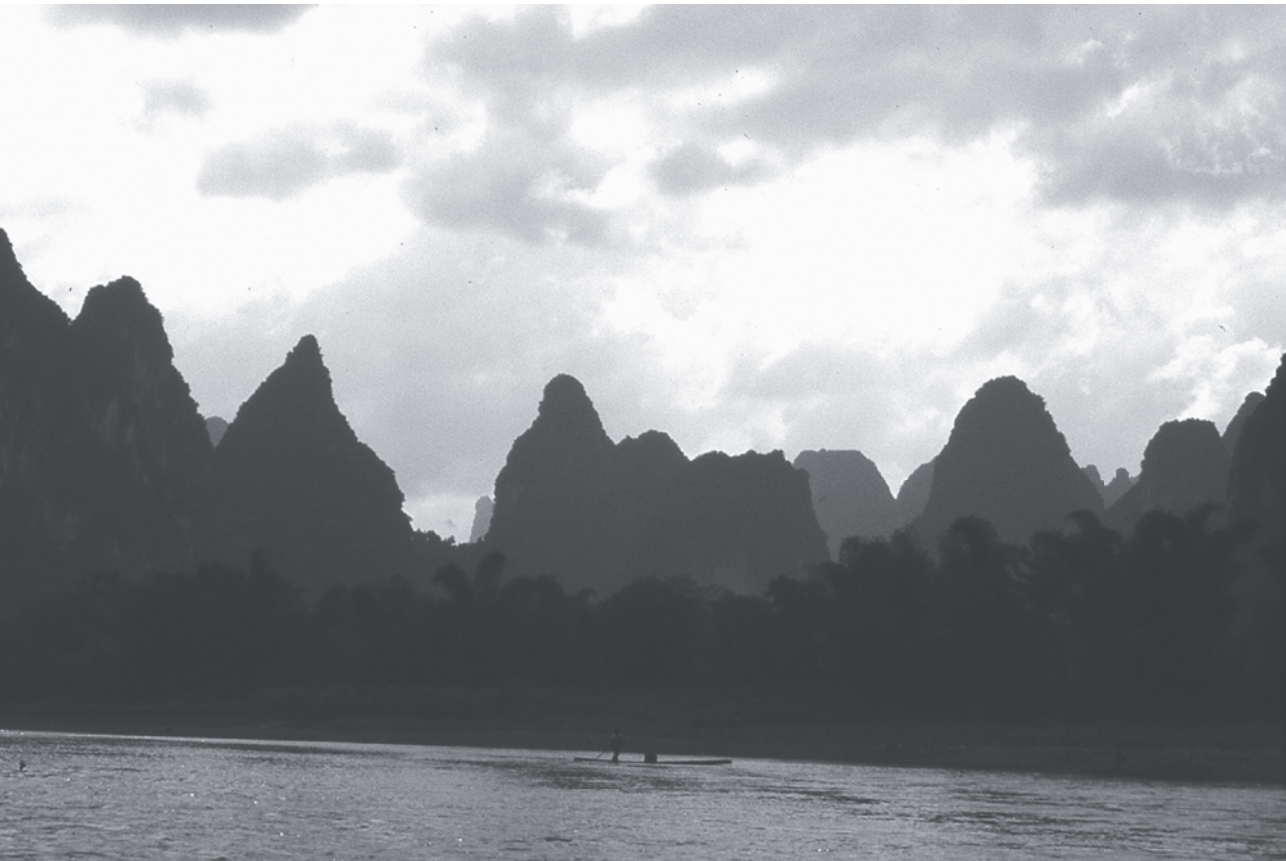
3.3 SOCIAL IMAGINARY, COLLECTIVE IMAGINATION AND THE VISUAL CULTURAL MEMORY

In order to be able to map the intangible values of the landscape, it is necessary to know and understand the psychology of perception of the society that relates with it. It is essential to discover which type of collective imagination shapes the aesthetic criteria that elevates a specific environment into the category of a significant landscape. When a person stops in his/her daily routine to look at a set, this fact already indicates that this person is conscious of the existence of this environment and recognises it. This 'look' can be impregnated by visual models coming from sources such us painting, literature, cinema, television, publicity, the Internet, or video games, among others. In this moment, this the 'look' becomes a 'cultural look' that transforms a space into a significant place. This cultural look has the power to transform the environment (urban, rural, natural, peri-urban, or any daily and ordinary space) into landscape. In the moment that an individual, a group or a cultural society qualifies a space as a *landscape*, and gives

this space the name of 'landscape' (or other linguistic forms that define the term landscape), means that this environment is charged with a mental signification.

Henri Bergson, in his work *Matter and Memory* (1896), asserts that perception is always "penetrated with memory". He analyses that in the perception of any immediate reality, details of past experiences mix up with the present. Many times, memories displace the real perceptions. The real experiences work as 'signs' that help to remember old images (Bergson, 1986: 81). In Bergson's opinion, memory gives to perception an individual conscience, that is to say, it gives subjectivity to the knowledge of reality. Any perception, independently of how short it is, links a process of remembrances; "Every perception is already memory" (Bergson, 1986: 84). The territory is covered by a layer of memories, individual and collective, gathering together the multiplicity of moments perceived and experienced in the past. The memory of human beings is only awakened in those spaces in the territory, the countryside, the natural or the urban environment, that remind them of a known historical past, while the perception of new environments, much more contemporary, can not become a new focus of attention without a conscious

Figure 2
When one looks at the mountains in Guilin, Guangxi region, China, we relate them to the imaginary of Chinese landscape paintings. These mountains, inserted in misty and watery environments, are Shan Shui (mountains and water), terminology that in Chinese language expresses the concept of landscape



and thoughtful experience. In our Information Age, society has an experience of the visible that is overwhelming, with the overload of too many images bombarding the senses inside visual mass media and Information and Communication Technologies (ICTs). This overload of visual information inhibits the recall and recollection of visual models stored in the mind. The overload of visual stimuli disorientates. Too much and visual input, and too varying, becomes banal and trivial, rendering ceaseless information boring. For that reason, in our present time, the environment itself becomes the source of a true phenomenological experience, built on physical and sensorial impressions that construct a new awareness without the need of a visual cultural memory.

3.4 THE ENVIRONMENT AS A SOURCE FOR SENSORIAL IMPRESSIONS

Society appreciates the Arcadian countryside because it follows a pictorial archetype of landscape beauty. However, ordinary places, the daily indistinct environment of the suburban areas, have nothing to say to the majority. There are hardly visual models gathered in the visual cultural memory that can work as a reference for judgment to elevate them to the category of landscapes. According to the definition of *transparency* by Henry Lefebvre, in *The Production of Space* (1974), a *transparent space* is perceived as innocent, freed from cultural memory, visual stereotypes and cultivated 'look'. It is, at the same time, a space of mental relations, of thoughts, of perfect readability, where reality that was hidden becomes visible thanks to the intervention of a mental illumination (Lefebvre, 1974: 27-28). "Everyday or degraded spaces" are *transparent spaces*. These spaces have the potentiality to activate in the subject new mental associations, articulating thoughts. These spaces do not need to be readable through images in order to provoke desires, because a space in its own *transparency* can unleash desires by itself.

There are two perceptual approaches to reality, one by *seeing it*, the other one by *sensing it*. The first approach corresponds to a subject that, in order to understand and discover "everyday or degraded spaces", chooses to stop and look at them. Therefore, the act of seeing is moved by a conscious individual choice. The sensing of a space, however, can be motivated by a deep feeling of reverie and body awareness; an unexpected enchantment stimulated by the power of the scene. Maurice Merleau-Ponty states how both, the act of *seeing* and act of *feeling* are sustained by the same 'pure thought'. This pure thought can be described as that which can be proved to be integrated by the rigorous correlation between the individual exploration of the world and the sensorial responses that reality can produce (Merleau-Ponty, 1964: 48-49). However, there is an essential difference between seeing and sensing. Seeing depends on the individual power of thinking. The visual perception is a perception of thought, while the approach to reality by means of the body is linked to the unconscious and the dream, and does not have clear consist-

Figure 3
A degraded space in suburbia, such us this wasteland space, in an industrial setting at Tianjing, China, cannot be elevated to the category of landscape. Only the sensing of the space by a body awareness, can awake a sense of enchantment

ency inside reason. To be enchanted by the unexpected, it is necessary to participate in an existential experience, where the perception of the world is replaced by body awareness.

3.5 MAPPING THE QUALITATIVE EXPERIENCE OF LANDSCAPE

Landscape representations contain a *space of perception*, and do not reproduce only appearances and information, but also a world of experiences that enlarges the knowledge of reality (Moya Pellitero, 2007: 117). The *space of perception of landscape representations using new* Information and Communication Technologies (ICTs), including Geospatial technologies has the particularity to be *dynamic*. GIS merges cartography with database technology, combining spatial data (geo-referential information) with non-spatial data. GIS has the capability to analyze spatial relationships within the digital stored spatial data, allowing complex modelling, and at the same time, it can interact with data and information created by users. In this way it is possible to examine processes and changes of qualitative order. For example, an extensive metropolitan area, such us Istanbul, with over twelve million inhabitants, is a hybrid and com-

plex territory, where the urban, the rural and the natural environment cohabit. However, the city itself is also a collective mode of reflection on the space. This mega-city generates a stratification of complex layers of reality and information in constant change, adapted to a specific physical context and cultural perception. In order to be able to comprehend and represent the quantitative and qualitative nature of its landscapes, and how these are perceived and appreciated, first it is necessary to find out which technologies of vision and data collection are needed to adapt to its complex physical and cultural nature.

The Dutch Environment Assessment Agency (PBL) monitors the perception and appreciation of landscape quality, with the aim to assess strategic policies in the field of environment, nature and spatial planning. Hans Farjon, Nickie van der Wulp and Leon Crommentuijn, in their article *Monitoring program of perception and appreciation of landscapes in the Netherlands* (2009), evaluate the results of the first enquiry in 2007. The main objective of the national policies on landscape is to improve by 25% the appreciation of the Dutch landscape between 2007 and 2020. Therefore, every three years the agency is carrying out a poll based on the SPEL (Scales for Perception and Evaluation of Landscapes), developed by Coeterier (2000), after twenty years of interviewing people in order to understand their landscape perception. In this poll, 4,800 persons were interviewed to evaluate 300 areas. Together with the poll they also used a GLAM - a GIS based Landscape Appreciation Model. They worked on a prediction of an average

Figure 4
Metropolitan area Istanbul, Turkey

appreciation of an area based on its physical characteristics (naturalness, historical identity, absence of urbanisation, absence of horizon, obstruction and age). They observed how GIS gives limited information about perception and GLAM cannot adequately replace questionnaires. The geographic data selected in order to map the concept of attractiveness of landscape was vague, because the subjects that were polled had a wide range of different perceptions about what they considered as naturalness of landscape. They concluded that GIS had a limited value when predicting the levels of appreciation of landscape; therefore they agreed that questionnaires were a basic instrument to obtain information on how society appreciates and perceives landscapes.

If social questionnaires are still the basic instrument to obtain qualitative information about the landscape, then, there are still many critical gaps, which mean that this methodology is still not reliable. Firstly, is the following aspects are not clear; the regularity of repetition of interviews and surveys, the critical number of surveys necessary to acquire enough information, the number of people and target groups addressed, or the variety of platforms required to inform these social groups, including the type of locations adequate for such surveys. All these problems could be solved once integrating the gathering of qualitative data through social digital networks and digital devices, and applying these data information into specific data visualisation interfaces working with GIS.

3.6 GIS AND DIGITAL INTERFACES

Visual artists, graphic designers, companies that deal with the management of digital information and data, need to map and give shape to the unlimited and variable contents of the Internet. Data information is alive and participative, built on connectivity, flows, inputs, exchange, and relations. The creation of interfaces helps to map this *complexity*. The visual experience of a complex information system requires, first, a clear structure and the ordering of data, establishing a grid of links and relations. It also requires flexibility to allow new information to enter the system and expand, in an open structure, where each user shares knowledge and participates. The aesthetic aspects of the interface help the visualisation of these data. The creation of exchange platforms requires the easy understanding of these digital spaces. Complexity sciences allow for the creation of an interactive and self-organised information space (topological algorithms, physical models, geometric representations, and geo-referenced information). Data visualisation companies are studios that create interactive mapping designs and data interface projects. The website VisualComplexity launched in 2005 by the interaction designer, information architect and design researcher Manuel Lima, gives a unified resource of the work that is being developed at the moment in the visualisation of complex networks. Many researchers (Ben Fry, Valdis Krebs, Santiago Ortiz, W. Bradford Paley, Martin Wattenberg, Stephen G. Eick, among others) are dedicated to data visualisation and the creation of spaces for the collective creation

of knowledge. With interactive methods, visual designs and images are linked to contents that can be ordered regarding the interests and the choice criteria of the Internet surfers, and simultaneously, the information and the contents relate and interact with each other. In this relation between people and information, the physical body, the corporeal movement and the touch, can also interact and relate with the data in the digital world. New multi-touch technologies allow more than one person to interrelate and communicate, fostering the phenomenological relation with the physical world through the digital space. These interfaces make the use of the data accessible and attractive, in order to facilitate interaction with the contents. Qualitative spatial data is built on the infinite number of contributions of users in the Internet, which interact with the physical space through social digital networks and digital devices. In the present Information Age, digital technologies are able to create an autonomous context, where the gathering of information about any environment can be done through the input of the same users, and at the same time can be distributed, stored and mapped. Both digital interfaces and GIS could work together in order to map both the quantitative and the qualitative nature of landscape. This dynamic space of information, constantly readapting to the new inputs of users, can create a reliable map of qualitative and intangible values of the landscape in any geographical context.

3.7 INFORMATION AGE AND THE DYNAMIC SPACE OF PERCEPTION

In our information age, many individuals have digital technologies that accompany their lives wherever they go. In this mobile and wireless world, information is associated to places. Places acquire the load of the data, the territory (urban, rural and natural) digitalises, charged with referenced geographic information. Data and information gathers in places and is associated to any environment. The microprocessors inserted in the objects, and the space with wireless connection to the Internet, link and interconnect, simultaneously, places and persons to the physic and cybernetic environment. These digital technologies connect among themselves, with other devices and with the environment. The physical objects, the places and the people are already connected with the shared information in the Internet. In the near future, microprocessors will make permeable clothes, objects, buildings, neighbourhoods and the whole territory.

At present, the new mobile generation 3G, allows an 'augmented reality' through the use of GPS, a compass, and a specific platform. This platform allows the use of the mobile to interact with the environment. The subject points the mobile in order to frame a scene in front of his/her eyes. Over the real image, a series of visual layers of information opens in the screen, which can be chosen and selected, depending on the personal interest. More information about a location can be acquired such as height, addresses, monuments, transportation, restaurants, etc. Currently, it is only possible to display icons and texts, but new advances will allow the adding

of a layer of videos and 3D simulations. The relation and interaction with the real environment can also become a playful game where reality mixes with videogames, or with a 3D virtual world. 3G mobiles allow any person to build unique and personal information of the scene in front of his/her eyes. This 'look' can be immortalised in a digital image or a video that is sent to friends or is posted on the Internet. An intimate experience can be communicated to a group or the worldwide community. The interaction and the response can also be immediate, with comments from friends in *Facebook*, *Twitter* and other digital social networks. *YouTube* and *Flickr* allow any person to exchange lived moments in digital video and photography, and share them and discuss them in social networks. It also allows one to select what to see, how and when. *Google Earth* allows the virtual 'touring' in any geographical context, with the possibility to record virtual geographical trips and go back to them whenever, sharing them with other people. *Street View* transports the subject to cities in virtual street walks. Any person can return virtually to a geographical place and share it with a digital community.

This information world of data is shared, discussed, compared, made by consensus, created in participation and dialogue. It is a world in which more and more people take part. The physical space cannot be totally understood without knowing what is happening in the digital world. Both are interconnected. An action, and ephemeral event in the urban and natural environment, that could go unnoticed and be nonexistent for the majority, acquires a relevant importance for a social network in a digital community. The physical environment, then, becomes part of a communicative discourse, shared by a specific collective. In order to analyse and monitor landscape evolution and change, to set landscape management and planning policies, a new participative methodology should take into account these already established social networks inside digital communities. This shared information could be used in the mapping of the social phenomenological experience of landscape, integrating computer-mapping applications with specific interfaces of Internet data collection.

3.8 CONCLUSION

Going back to the main question: how to map and monitor the two natures of the landscape at the same time, the quantitative and the qualitative, the tangible and the intangible, we should argue that the mapping should include phenomenological information that is constantly expanding and actualising in the Internet. This information is outside the subject, and inside a digital environment that can be always consulted, as an external memory. In our present time any space contains mental relations, and articulating thoughts.

If we consider a new social participative methodology, we should see the potentials of a digital society that did not loose the physical and phenomenological contact with the environment,

Figure 5
The new Tripwolf iPhone App with augmented reality. Frame from You Tube advertising (source: Tripwolf GmbH, 2010)

on the contrary, this sensorial and corporeal contact has been intensified. The Information Age does not create isolated individuals in front of a computer, but collectives and groups eager for communication in infinite social networks. Landscape is not only appreciated by the 'look' but also by the rest of the body senses. Landscape becomes a somatic space where individuals are not outside, taking distance, and 'looking at' the view, but inside of it, creating it by the same corporeal action and body awareness. The collective game, based on the cooperation and the self-organisation is not only happening in the Internet, but also in the physical space and the landscape. The collective game, unexpected, breaks with the daily banal life. With the play, time stops for a while. This pause in the daily life, with the objective to have fun, can transform reality into a musical, establish new and temporary behaviour rules, provoke transgression, always during a short period of time, to return later to the normal life. For example *Flash mobs* is an action in which a group of people agrees to meet in a specific geographical location, to act and perform, and later disperse. These events are organised through the Internet and they do not have any purpose, only the game, the entertainment and the collective participation for its own sake. Any space in the territory can be transformed into a choreographic space. The body intervenes adding a new layer of signification. In the mapping of the qualitative and intangible values of the landscape, a new social participative methodology should take into consideration,

Figure 6
Tócame, soy tuyo [Touch me, I'm yours] by the artist Luke Jerram. From March 2010 twenty pianos were left in public spaces in Barcelona, for anonymous people to play them during the International Music Competition Maria Canals. The location of the pianos in the city and images of anonymous people playing them could be found in the Internet

together with the way society perceives and appreciates the landscape 'by the look', also the degrees of social interaction with it, and the layers of exchange of information and communication that the landscape contains.

REFERENCES

Baudrillard, J. (1995) *The perfect Crime*. London, Verso.

Bergson, H. (1896) Materia y Memoria. In: Deleuze, G. (1995/1957) *Memoria y Vida, Textos Escogidos por Gilles Deleuze*. Barcelona, Altaya. In English: idem. (1996/1896) *Matter and Memory*. New York, Dover Publications.

Bergson, H. (1907) La Evolución Creadora. In: Deleuze, G. (1995/1957) *Memoria y Vida, Textos Escogidos por Gilles Deleuze*. Barcelona, Altaya. In English: idem. (2007/1907) *Creative Evolution*. New York, Palgrave Macmillan.

Berque, A. (1994) *Cinq Propositions pour une Theorie du Paysage*. Paris, Champ Vallon.

Berque, A. (1995) *Les Raisons du Paisage, de la Chine Antique aus Environnements de Synthèse*. Paris, Hazan.

Corner, J. (2006) *Terra Fluxus*. In: Waldheim, Ch. (ed.), *The Landscape Urbanism Reader*. New York, Princeton Architectural Press.

Council of Europe (2000) *European Landscape Convention*, European Treaty Series, 176 (10)

Farjon, H., Van der Wulp, N., and Crommentujn, L. (2009) Monitoring program of perception and appreciation of landscapes in the Netherlands. In: *Indicadors de paisatge. Reptes I perspectives* [Landscape indicators. Challenges and perspectives]. Olot, Observatori del Paisatge de Catalunya.

Lefebvre, H. (2005/1974) *The Production of Space*. Oxford, Blackwell Publishers.

Merleau-Ponty, M. (1964) *Lo Visible y lo Invisible*. Barcelona, Seix Barral, (1970). In English: idem. (1968/1964) *The Visible and the Invisible*. Evanston, Northwestern University Press.

Moya Pellitero, A.M. (2007) *The Image of the Urban Landscape. The Re-discovery of the City through different Spaces of Perception*. Eindhoven, Bouwstenen Publicatieburo.

Nogué, J., Puigbert, L. et al. (2010) *Paisatge i Participació Ciutadana, L'Experiència dels Ctalàges de Paisatge de Catalunya* [Landcape and Social Participation, The Experience of the Catalonian Landscape Catalogues]. Olot, Observatori del Paisatge de Catalunya: 9.

Pourier, S (2005) *A world of Relationships, Itineraries, Dreams, and Events in the Australian Western Desert*. Toronto, University of Toronto Press.

Watsuji, T. (2006/1935) *Antropología del Paisaje: Climas, Culturas y Religiones*. Salamanca, Sígueme. In English: idem. (1971) *Climate and Culture: A Philosophical Study*. Tokyo, Hokuseido.